

# Document made available under the Patent Cooperation Treaty (PCT)

International application number: PCT/US05/004135

International filing date: 09 February 2005 (09.02.2005)

Document type: Certified copy of priority document

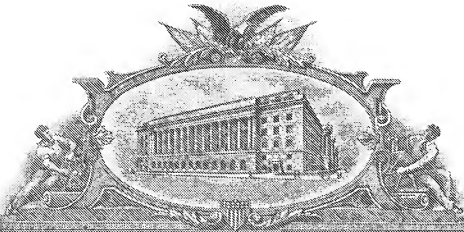
Document details: Country/Office: US  
Number: 60/543,044  
Filing date: 09 February 2004 (09.02.2004)

Date of receipt at the International Bureau: 11 March 2005 (11.03.2005)

Remark: Priority document submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b)



World Intellectual Property Organization (WIPO) - Geneva, Switzerland  
Organisation Mondiale de la Propriété Intellectuelle (OMPI) - Genève, Suisse



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

*March 01, 2005*

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THE UNITED STATES PATENT AND TRADEMARK OFFICE OF THOSE PAPERS OF THE BELOW IDENTIFIED PATENT APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A FILING DATE.

APPLICATION NUMBER: 60/543,044

FILING DATE: *February 09, 2004*

RELATED PCT APPLICATION NUMBER: PCT/US05/04135



Certified by

Under Secretary of Commerce  
for Intellectual Property  
and Director of the United States  
Patent and Trademark Office

**PROVISIONAL APPLICATION FOR PATENT COVER SHEET**

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

Express Mail Label No. EU730872270US

22151 U.S. PTO  
60/543044

020904

INVENTOR(S)					
Given Name (first and middle [if any])		Family Name or Surname		Residence (City and either State or Foreign Country)	
Ian		WEBB		Darien, Connecticut	
Additional inventors are being named on the _____ separately numbered sheets attached hereto					
TITLE OF THE INVENTION (500 characters max)					
ENHANCED AIRLINE AUTHORIZATION DATA FOR FRAUD CONTROL					
Direct all correspondence to: CORRESPONDENCE ADDRESS					
<input checked="" type="checkbox"/> Customer Number: 000041461					
OR					
<input type="checkbox"/> Firm or Individual Name		Charles A. Rattner			
Address		12 Homewood Lane			
Address					
City		Darien	State	CT	Zip 06820-6109
Country		USA	Telephone	203-662-9858	Fax 203-547-6129
ENCLOSED APPLICATION PARTS (check all that apply)					
<input checked="" type="checkbox"/> Specification Number of Pages 9		<input type="checkbox"/> CD(s), Number _____			
<input type="checkbox"/> Drawing(s) Number of Sheets _____		<input type="checkbox"/> Other (specify) _____			
<input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76					
METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT					
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.		FILING FEE Amount (\$) <div style="border: 1px solid black; width: 100px; height: 50px; display: flex; align-items: center; justify-content: center;">160.00</div>			
<input type="checkbox"/> A check or money order is enclosed to cover the filing fees.					
<input checked="" type="checkbox"/> The Director is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number: 502396					
<input checked="" type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.					
The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.					
<input checked="" type="checkbox"/> No.					
<input type="checkbox"/> Yes, the name of the U.S. Government agency and the Government contract number are: _____					

[Page 1 of 1]

Respectfully submitted

SIGNATURE

TYPED OR PRINTED NAME Charles A. Rattner, Esq.

TELEPHONE 203-662-9858

Date February 9, 2004

REGISTRATION NO. 40.136

(if appropriate)

Docket Number: 1214P023

**USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT**

This collection of information is required by 37 CFR 1.51. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Provisional Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PATENT

Docket No. 1214P023

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s) : Ian WEBB  
Serial No. : N/A Group: N/A  
Filed : February 9, 2004 Examiner: N/A  
For : ENHANCED AIRLINE AUTHORIZATION DATA FOR FRAUD  
CONTROL

**CERTIFICATE OF EXPRESS MAILING**

Mail Stop Provisional Patent Application  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE  
P.O. Box 1450  
Alexandria, VA 22313-1450

**EU 730872270 US**

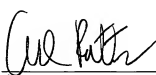
Sir:

I hereby certify that the attached Provisional Application Cover Sheet; Provisional Application (9 pp.  
of Specification), Credit Card Payment Form; and Return Receipt Post Card

along with any paper(s) referred to as being attached or enclosed and this Certificate of Express Mailing are being deposited with the United States Postal Service on date shown below with sufficient postage as express mail (Certificate No. EU730872270US) in an envelope addressed to: Mail Stop Provisional Patent Application, Director of the United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA, 22313-1450.

Respectfully submitted,

Dated: February 9, 2004

By:   
Charles A. Rattner  
Reg. No. 40,136

CORRESPONDENCE ADDRESS:  
12 Homewood Lane  
Darien, CT 06820-6109  
(203) 662-9858

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

## **IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

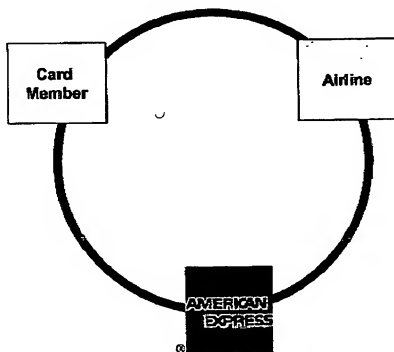
## ENHANCED AIRLINE AUTHORIZATION DATA FOR FRAUD CONTROL

### Technical Field:

This invention generally relates to data processing for financial functions, and in particular it relates to online transactions.

### Background:

Many card issuers have a closed loop transaction network including its card members and various vendors, such as an airline carrier, as shown in the Figure below.



As both issuer and acquirer for various online transaction, a card issuer, such as AMERICAN EXPRESS, is uniquely positioned to offer advanced risk benefits to its customers, merchants and partners.

Currently, due to the standard and minimal data received in credit transactions involving airline tickets (typically only card holder name, purchase amount, vendor identification, credit card account number, credit card expiration date, and transaction date), a card issuer has limited modeling capabilities to protect airline vendors from fraudulent credit activity. Delays between authorization and submission further limits a card issuer's abilities to make optimized risk decisions in any given transaction.

Detailed Description:

The present disclosure provides an enhancement to current credit transaction processes in which additional data will be made available to the card issuer in credit transactions involving the purchase of tickets for an airline, as shown in the Figure below:

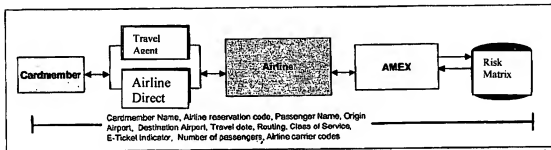
Today	Future
<ul style="list-style-type: none"> <li>• Card member number</li> <li>• Expiration date</li> <li>• Amount of transaction</li> <li>• Airline merchant number</li> <li>• IATA code</li> </ul>	<ul style="list-style-type: none"> <li>• Card member number</li> <li>• Expiration date</li> <li>• Amount of transaction</li> <li>• Airline merchant number</li> <li>• IATA code</li> <li>• Cardmember Name</li> <li>• Airline reservation code</li> <li>• Passenger Name</li> <li>• Origin Airport</li> <li>• Destination Airport</li> <li>• Travel date</li> <li>• Routing</li> <li>• Class of Service</li> <li>• E-Ticket Indicator</li> <li>• Number of passengers</li> <li>• Airline carrier codes</li> </ul>

When an online purchase of airline tickets is initiated by a card holder, the following information will now requested from the card holder and/or vendor: card holder name, airline reservation code, passenger name, origin airport for fare being purchased, destination airport for fare being purchased, travel dates for fare being purchased, class of service (i.e. first class, business class, economy class) for the fare being purchased, an indication of whether an electronic ticket (e-ticket) is requested for the fare, a number of passengers for which tickets are being purchased and any airline carrier and routing codes.

This data is collected in an automated and standardized manner during a standard credit transaction initiation and authorization process. The data is immediately presented to one or more software-implemented fraud risk matrices maintained by the card issuer, which then evaluate the received transaction data against the card holder's historical



behavior, other card holder behavior, merchant and travel agent behavior and statistics involving airline transactions generally. From this, an immediate risk decision (i.e. accept or reject the transaction based on risk factors) can be made. An exemplary schematic block diagram of the network infrastructure for processing such transactions is shown in the Figure below:

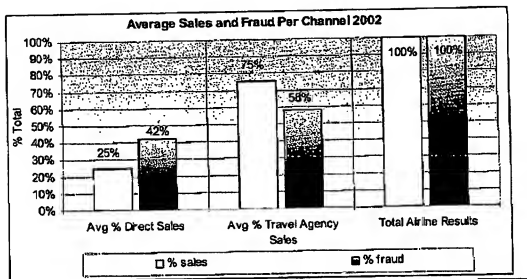


Any transactions in which is identified as high risk may be rejected. Such a result may occur where the risk matrices determine that the data indicates a probability of fraud above a certain threshold value. This threshold value may be adjusted so that legitimate transactions are not unduly prevented by the disclosed risk evaluation infrastructure.

It is important that the introduction of this fraud risk decision-making process not substantially impact the standard time it currently takes to authorize a credit transaction with airlines or travel agencies, and does not unduly impact the identification and processing of legitimate transactions (that is, legitimate transactions should never be mis-identified as fraudulent).

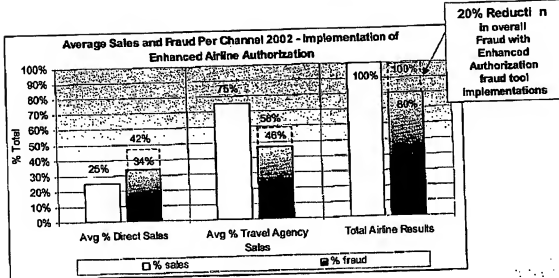
Illustrated in the Figure below is a common airline business model for distribution of direct and travel agency sales. The data represent averages for percentage of direct sale, percentage of travel agency sales, percentage of direct sales fraud and percentage of

travel agency fraud for 8 major airline carriers covering various major travel regions (i.e. North America, Europe and Asia):



The enhanced processes disclosed herein is projected to reduce fraud in airline ticket transactions by 20%, thus providing savings to airline carriers by decreasing or eliminating chargebacks for fraudulent transactions, without increasing transaction referral rates. In fact, standard referral rates can be expected to remain constant or even decrease from previous standard levels.

In the Figure below showing an average airline fraud-to-sales distribution, fraud losses in the direct sale and travel agency sale channels are both reduced 20%, for a combined total airline fraud of 80% of previous levels.



The enhanced processes disclosed herein is an important tool that can be consistently implemented for all airline transactions on the first day that the enhanced data is enabled to be collected and transmitted to a card issuer. Such data can be collected with only minor adjustments to current software and without requiring the replacement of network hardware currently used in many systems.

Airlines that participate in collecting and providing this enhanced data will realize fewer fraudulent airline tickets charged back to them since the fraud models used have a higher probability of detecting and preventing fraudulent transactions than in existing systems. Airline vendors will also spend less time serving fraudulent customers or investigating chargebacks, resulting in reduced operational expenses. Additionally, the system makes it harder for a card holder that legitimately enters into a transaction from later claiming that the transaction was fraudulent. In this manner, the card issuer, card holder and airline vendors each benefit from the security provided by the disclosed enhanced processes.

The card issuer may secure the collected enhanced transaction data in a variety of known and effective manners so that card member information cannot be obtained or used by unauthorized third parties.

The disclosed enhancements to online credit transactions have applicability to various types of transactions other than the specific examples involving airlines as described herein, as will be apparent to one of ordinary skill in the art.

Although the best methodologies of the invention have been particularly described in the foregoing disclosure, it is to be understood that such descriptions have been provided for purposes of illustration only, and that other variations both in form and in detail can be made thereupon by those skilled in the art without departing from the spirit and scope of the present invention, which is defined first and foremost by the appended claims.

What is claimed is:

1. A method for evaluating credit transactions, comprising:

receiving the following information from an account holder for a transaction involving the purchase of airline tickets: an account holder name, an airline reservation code, a passenger name, an origin airport, a destination airport, a travel date, a routing code, a class of service, an electronic ticket indicator, a number of passengers traveling and an airline carrier code;

processing the received information through a fraud risk evaluation matrix; and

determining an approval or rejection of the transaction based on said processing, without impact standard transaction authorization times.

Abstract:

A process for reducing fraud risk in credit transactions, particularly those involving airline ticket purchases, includes collecting the following data: credit card holder name, airline reservation code, passenger name, origin airport, destination airport, travel date, routing, class of service, e-ticket indicator, number of passengers traveling and airline carrier code. This enhanced data is passed to a fraud risk evaluation matrix that uses historical card member behavior and optimal risk decision-making factors to authorize or reject the transaction without slowing standard authorization processing times.